



U.S. Fish & Wildlife Service

Critical Habitat for Six Species of Mariana Island Birds and Bats

Under the Endangered Species Act, the U.S. Fish and Wildlife Service is charged with designating critical habitat for threatened and endangered species whenever it is determined to be prudent and determinable. As part of a lawsuit settlement, we have reviewed a 1994 decision that critical habitat for six Mariana species is not prudent. A new prudency determination and proposed rule to designate critical habitat were published in the October 15, 2002, *Federal Register*. This fact sheet summarizes that proposed rule.

What are the six federally listed species and what is their status?

The six federally listed species under consideration are the Mariana crow or Aga (*Corvus kubaryi*), Guam Micronesian kingfisher or Sihek (*Halcyon cinnamomina cinnamomina*), Guam broadbill or Chuguanguang (*Myiagra freycineti*), Guam bridled white-eye or Nosa (*Zosterops conspicillatus conspicillatus*), Mariana fruit bat or Fanihi (*Pteropus mariannus mariannus*); and little Mariana fruit bat or Fanihi (*Pteropus tokudae*).

Little Mariana fruit bat: This species was a member of the Old World fruit bat family Pteropodidae. It was first described in 1931 and is believed to have been endemic to the island of Guam. Only three specimens of this species have been collected, and virtually nothing is known of its life history or distribution. In appearance it was similar to the Mariana fruit bat, but smaller, with a wingspan of 650 to 709 millimeters (25 to 28 inches). It was last recorded in 1968, when one female was shot by hunters in mature limestone forest, and likely is extinct.



Photo by Anne Mahen-Guam DAWR

The Guam Micronesian kingfisher is currently found only in captivity. It was common throughout Guam as recently as in 1945, and even in 1981, 3,000 birds were counted.

Mariana fruit bat: This species also is a member of the Old World fruit bat family Pteropodidae and historically inhabited all of the major islands in the Mariana Archipelago. Mariana fruit bats have a wingspan of 860 to 1065 millimeters (34 to 42 inches). The abdomen, wings, and head are dark brown, while the back and sides of the neck are golden or pale brown. This species typically roosts during the day in colonies in undisturbed native forests and forages widely at night on nectar, fruit, and leaves of at least 22 plant species. At present, only the Guam population of Mariana fruit bat is listed as endangered.

On Guam, the bat was found historically throughout native forests. In 1958 the estimated population was approximately 3,000 fruit bats. By 1995, the island population had been reduced to between 300 and 500 and was restricted primarily to forests on the northern tip of the island, although small numbers are also found in southern Guam. Illegal hunting is believed to be one of the major causes of decline in this species, but predation by the brown treesnake (*Boiga irregularis*) also may be an important limiting factor.

Micronesian kingfisher: The subspecies *H. cinnamomina cinnamomina* is



Photo by Merlin Turtle Bat Conservation International

Mariana fruit bat populations declined from an estimated 3,000 bats in 1958 to fewer than 500 in 1995.

endemic to Guam. Other subspecies are endemic to Palau and Pohnpei. Micronesian kingfishers are blue on the tail and wings, while the head, neck, upper back, and underparts are rusty brown in males and white in females. The Micronesian kingfisher preys on insects and small vertebrates, and nests in cavities excavated in soft, rotten wood of mature, large-diameter trees and in termite nests in trees.

The Guam subspecies was common throughout Guam as recently as 1945, and was found throughout most forest types. The population was estimated at 3,000 birds in 1981, but the kingfisher declined rapidly and now is no longer found in the wild. The last sighting of the species in the wild was in 1988. However, a captive population of 63 birds has been established and is maintained at 11 zoos in North America.

The primary threat to the Micronesian kingfisher is predation by the brown treesnake. Once the brown treesnake is controlled or eradicated, offspring produced by the captive flock can be reintroduced to Guam.

Mariana crow: This species is endemic to Guam and the island of Rota in CNMI, where the species is more common, though still rare. The Mariana

crow is a small, black crow weighing approximately 205 to 270 grams (7 to 10 ounces). It is omnivorous and forages at all heights in the forest on a wide range of invertebrates, small vertebrates, fruit, seeds, and foliage.

The Mariana crow associates in family groups, and pairs defend relatively large territories in areas with little human disturbance. Nest predation by the brown treesnake and rats, habitat loss, and human disturbance are the primary threats to this species.

Historically, the Mariana crow was widely distributed in forest habitats on both Guam and Rota, but by the mid-1970s the crow had disappeared from most of Guam and was restricted to the northern cliff forests. The population on Guam now numbers 12 birds, 10 of which were translocated from Rota or mainland zoos. On Rota, the population is estimated to be 343-654 individuals, including approximately 85-110 breeding pairs. The population has been declining at least since the 1980s and has decreased by approximately 38 percent since the early 1990s.

Bridled white-eye: The Guam subspecies of bridled white-eye, *Zosterops conspicillatus conspicillatus*, was endemic to Guam and was one of two subspecies in the Mariana Islands. It weighed approximately 10.0 grams (0.3 ounces) and had a white eye ring,

greenish yellow back, wings, and tail, and a yellow throat, breast, and abdomen.

The bridled white-eye was recorded historically in virtually all habitats at all elevations on Guam, but by 1983 the population was restricted to northern Guam and was thought to have dropped below 50 individuals. The last family group was observed in 1982, and the last individual was observed in 1983. The primary cause of the decline was predation by the introduced brown treesnake. The Guam subspecies of bridled white-eye likely is extinct.

Guam broadbill: This flycatcher was a member of the family Monarchidae and was endemic to Guam. The Guam broadbill weighed approximately 12.0 grams (0.4 ounces) and had a



Photo by M. Lusk/USFWS



The Mariana crow has a very small population (12 birds) in northern Guam. Although the population on Rota is larger, it has declined about 38 percent in the last decade.

bluish head, neck, back, wings, and tail and a white throat and light cinnamon breast.

Although once widespread in all but grassland habitats, by 1983 the population was restricted to a small area on the north coast and was estimated at fewer than 100 individuals. The primary cause of the decline was predation by the introduced brown treesnake. The last sightings of this species took place in 1984. The Guam broadbill likely is extinct, and a proposed rule to remove this species from the Endangered Species list was published in the *Federal Register* on January 25, 2002 (67 FR 3675).

What is a “prudence” determination?

Under the Endangered Species Act, we must first determine whether critical habitat is “prudent,” *i.e.*, would it benefit the species or would it increase the degree of threat to the species. In some situations, especially for plants, identifying the location of the species may increase the risk of human collection.

What did you determine for these species?

Since the little Mariana fruit bat, Guam broadbill, and Guam bridled white-eye are believed to be extinct, we determined that the designation of critical habitat is not prudent because it would be of no benefit to the species. If these species are rediscovered, we could revisit this decision in the future.

For the Mariana fruit bat, Micronesian kingfisher, and Mariana crow, we determined that critical habitat could provide some benefits by protecting unoccupied areas through consultations regarding Federal activities, by focusing conservation activities on designated areas, and by increasing public awareness about these species and their habitats.

What critical habitat are you proposing for these species?

Lands proposed as critical habitat for the Mariana fruit bat, Micronesian kingfisher, and Mariana crow occur in



The Guam broadbill was last seen in 1984 and is presumed to be extinct.

two units for each species on Guam (one in northern Guam and one in southern Guam) and in one unit for the Mariana crow on Rota. Because habitat requirements for each of the three species occur predominantly in the remaining tracts of native forest on Guam and Rota, the size, shape, and locations of the proposed critical habitat units largely reflect these tracts of forest.

The proposed northern unit on Guam is the same for the fruit bat and kingfisher, and the proposed southern unit on Guam is the same for all three species. The northern unit proposed for the Mariana crow is slightly smaller than for the Mariana fruit bat or Micronesian kingfisher and is contained within the larger unit.

Proposed critical habitat includes land under Federal, Territorial, Commonwealth, and private ownership, with Federal lands being managed by the Department of Defense and the Department of the Interior.

All of the proposed critical habitat on Guam currently is occupied by the Mariana fruit bat. Approximately 8 percent of proposed critical habitat on Guam currently is occupied by the Mariana crow, but 52 percent was occupied as recently as 1994. None of the proposed lands on Guam are

currently occupied by the Micronesian kingfisher, but all were occupied historically. On Rota, all of the proposed critical habitat is occupied by the Mariana crow.

Maps of the proposed critical habitat and a table showing acreage by land ownership are found at the end of this fact sheet.

Why is the Fish and Wildlife Service proposing to designate critical habitat for these three species?

In 1994, the Fish and Wildlife Service withdrew a 1991 proposed rule to designate critical habitat. Most of the lands in the 1991 proposed rule had been incorporated into the Guam National Wildlife Refuge, and we determined that critical habitat designation was not prudent because it would not provide these species any benefits beyond that already provided through inclusion in the Refuge.

In 2000, a complaint was filed by the Marianas Audubon Society and Center for Biological Diversity against the Fish and Wildlife Service challenging our 1994 “not prudent” determination for critical habitat designation for the six species on Guam. We negotiated a dismissal of the case with the plaintiffs, and agreed to withdraw our 1994 determination and submit for publication

new prudency determinations and, if applicable, final critical habitat designations by June 1, 2003. This dismissal was ratified by the Guam District Court in April 2002. The Fish and Wildlife Service is initiating the critical habitat designation process to meet the negotiated agreement and deadline.

What is critical habitat?

Critical habitat is the term used in the Endangered Species Act to define those areas with the physical and biological features essential to the “conservation” of a threatened or endangered species, and that may require special management considerations or protection.

“Conservation” means recovery of a species to the point where it is no longer threatened or endangered. So, critical habitats are those areas of habitat that are needed by an endangered or threatened species in order to recover and that may require special management or protection.

How do you identify critical habitat?

In the process of designating critical habitat, the Fish and Wildlife Service considers the species’ current range (*i.e.*, areas in which the species currently exists) and historical range (*i.e.*, areas that the species formerly occupied within historical memory). Then we identify elements of the habitat within those areas that are needed for the species in question to live, reproduce, and recover to the point where it can be removed from the list of threatened and endangered species.

Identification of critical habitat begins with the species’ recovery plan recommendations for target population levels and distribution for removing these species from the endangered species list. For example, current recovery plans recommend stable populations of Guam Micronesian kingfishers in northern and southern Guam, Mariana fruit bat populations with at least two permanent colonies in northern and one permanent colony in southern Guam, and stable populations of Mariana crows in northern and southern Guam and on Rota.

We then determine, using the best available information, the current and historical range of each species, the amount and type of habitat needed for recovery of each species, and the current availability of each habitat type needed. Finally, we assess the current management practices on lands that may be considered for designation as critical habitat and determine if these management practices are adequate for the recovery of the species.

In selecting currently unoccupied lands, we give priority to lands that provide the species’ most preferred habitat types, were most recently occupied, and form large blocks of suitable habitat. Unoccupied areas will allow existing populations to expand, and help link subpopulations by encouraging genetic exchange as single birds or bats move from one area to another.

Areas containing currently existing features and structures such as buildings, roads, aqueducts, antennas, water tanks, agricultural fields, paved areas, lawns, and other urban landscaped areas will be excluded because they do not contain the habitat elements needed by these species.

We are required to use the best scientific data available and to consider the economic and other impacts of designating an area as a critical habitat. An economic analysis of the proposed critical habitat designation will be prepared and made available for public review at a later date, but before final decisions are made.

Can the public participate in the process for deciding whether to designate critical habitat?

Yes. The Endangered Species Act guarantees the public ample opportunity to comment on critical habitat proposals, and our policy is to encourage such participation in the rulemaking process. Proposed designations are published in the *Federal Register* and provide for a public comment period of at least 60 days.

To ensure that all interested members of the public are aware of the proposals, announcements of the proposed rulemaking and the public comment period are published in local newspapers. In addition, we directly notify Federal, State, and local agencies, as well as other interested parties.



Photo by M. Lusk/USFWS

The Mariana fruit bat forages and roosts primarily in native limestone forest, but also are seen in coconut plantations and coastal forest.

We also plan to hold informal public meetings on Guam and Rota to discuss the proposed rule and answer questions. These meetings are scheduled as follows:

Wednesday, October 23:

Tamuning Community Center, 5:00 p.m. to 7:30 p.m.

Thursday, October 24:

Rota Resort and Country Club, 6:00 p.m. to 8:00 p.m.

Formal public hearings have been scheduled to receive comments on the proposed rule:

Wednesday, November 6:

Rota Resort and Country Club, 6:00 p.m. to 8:00 p.m.

Thursday, November 7:

Outrigger Guam Resort, 6:00 p.m. to 8:00 p.m.

The Guam hearing will be preceded by an informal question and answer session from 3:30 p.m. to 4:30 p.m.

All information provided during the public comment period will be analyzed carefully by the Fish and Wildlife Service before we make a final decision on critical habitat designation, and responses to comments received are published in the decision document.

How do I obtain a copy of the proposed rule?

The proposed rule is posted on the Fish and Wildlife Service website at <http://pacificislands.fws.gov>. A limited number of copies are available by calling us in Honolulu at 808/541 3441.

Where do I send my comments?

Written comments on the proposed rule may be submitted by mail to the Field Supervisor, U.S. Fish and Wildlife Service, Pacific Islands Office, 300 Ala Moana Blvd., Room 3-122, Box 50088, Honolulu, HI 96850. You may also bring them to the public hearings or submit them by electronic mail to Mariana_CritHab@r1.fws.gov.

How would critical habitat affect the Territory of Guam, Commonwealth of the Northern Mariana Islands, or private landowners?

Critical habitat designation does not affect activities on GovGuam, CNMI, or private lands unless some sort of Federal permit, license, or funding is involved. Activities of the government or private landowner, such as farming, grazing, and logging, generally are not affected by a critical habitat designation, even if the landowner's property is within the geographic boundaries of the critical habitat.

The designation has no impact on individual, village, or local government actions if there is no Federal involvement, nor does it signal any

intent of the Federal government to acquire or control the land. It does not in any way create a wilderness area, preserve, or wildlife refuge, nor does it close an area to human access or use.

How would critical habitat affect Federal agencies?

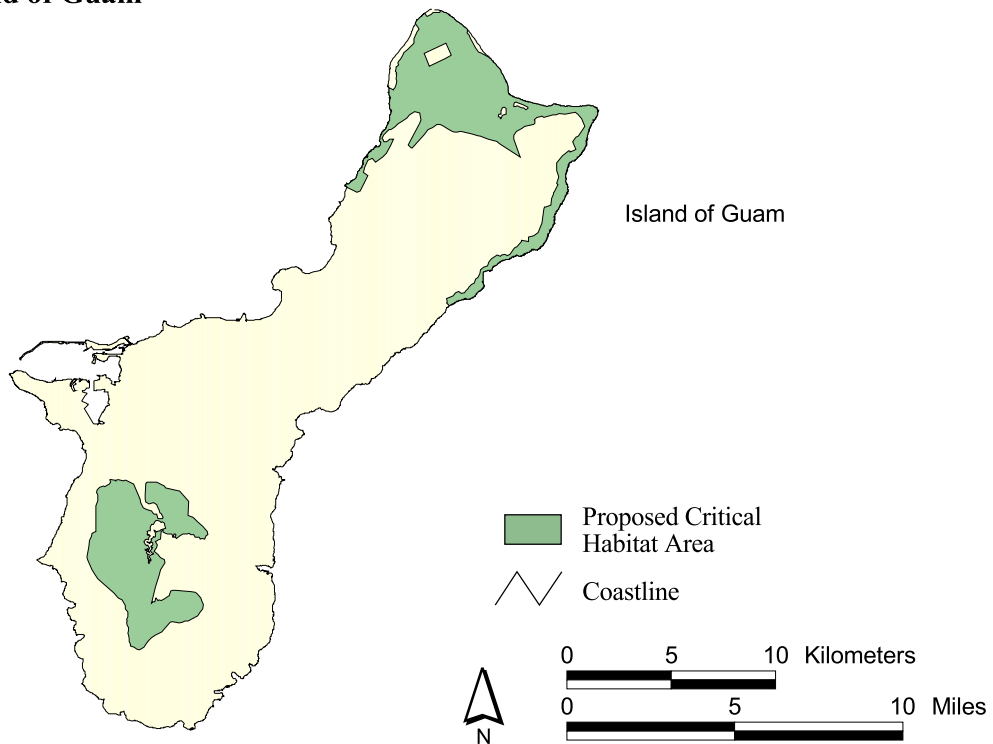
Federal agencies are required to ensure that any activity they fund, carry out, or authorize is not likely to jeopardize the survival of a listed species or destroy or adversely modify its critical habitat. By consulting with the Fish and Wildlife Service, an agency usually can minimize or avoid any potential conflicts with listed species and their critical habitat, and the proposed project may be undertaken. Most projects proceed unaffected.

Proposed Critical Habitat Units by Land Ownership

<u>Unit</u>	<u>Federal</u> ¹	<u>GovGuam/CNMI</u>	<u>Private</u>	<u>Total</u>
Unit A. Northern Guam				
Mariana fruit bat & Micronesian kingfisher	12,724 acres	1,461 acres	153 acres	14,338 acres
Mariana crow ²	12,346 acres	97 acres	97 acres	12,540 acres
Unit B. Southern Guam				
All species	7,116 acres	1,363 acres	1,985 acres	10,464 acres
Unit C. Rota				
Mariana crow	0 acres	5,581 acres	503 acres	6,084 acres
Totals				
Mariana fruit bat & Micronesian kingfisher	19,840 acres	2,824 acres	2,138 acres	24,803 acres
Mariana crow ²	19,463 acres	7,041 acres	2,585 acres	29,089 acres
¹ Federal lands are under the ownership or jurisdiction of the Department of Defense or the U.S. Fish and Wildlife Service. ² On Guam, proposed critical habitat for the Mariana crow lies within the proposed habitat for the Mariana fruit bat and Micronesian kingfisher.				

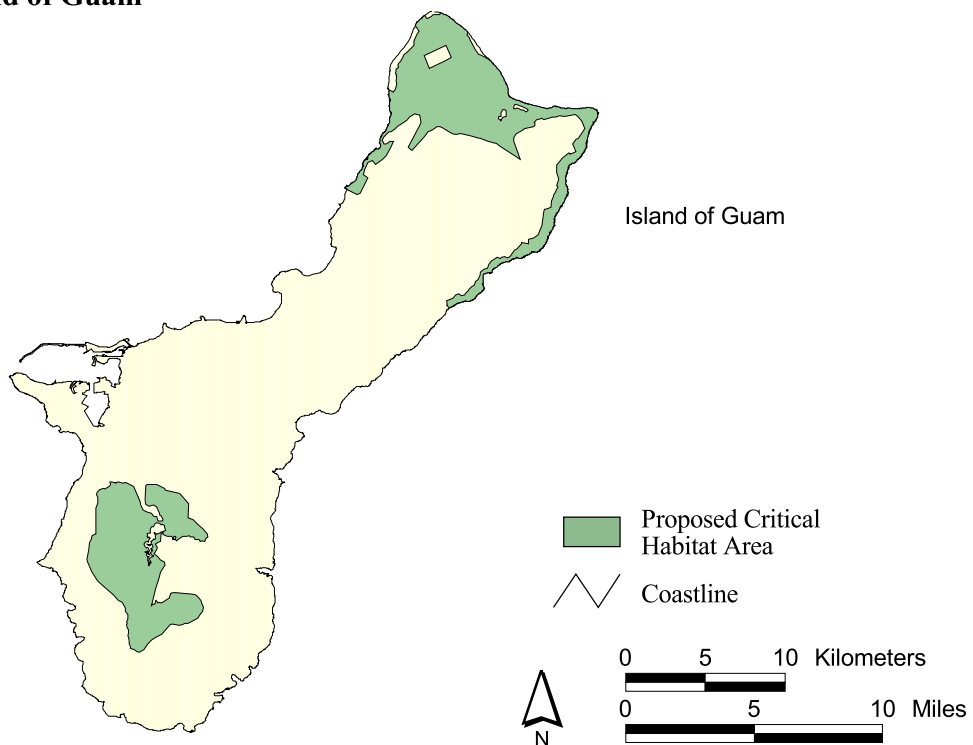
**General Locations of Units
for the Mariana Fruit Bat**

Island of Guam



**General Locations of Units
for the Micronesian Kingfisher**

Island of Guam



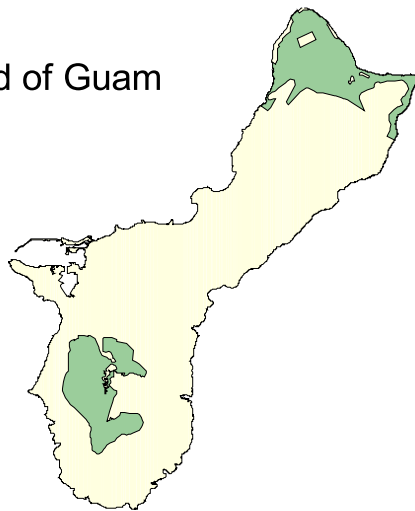
General Locations of Units for the Mariana Crow

Islands of Guam and Rota



Island of Rota

Island of Guam



 Proposed Critical
Habitat Area

 Coastline



0 10 20 Kilometers



0 10 20 Miles

